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Further, despite the sharp decline in references to Pact training and planning for the offensive use of chemicals this activity has not completely disappeared. 25X1

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Pact writings indicate they go back at least to the mid-to-late sixties although the number of nuclear delivery systems in the Polish forces had increased. 25X1

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In fact, Soviet General Staff instructional materials from the mid-to-late seventies give an allocation of some 680 nuclear warheads--but no chemical weapons--to support an entire operation of a coastal, apparently mostly Polish, front. CIA Statute (97)

TCS-5548/83

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It can be argued that the training gained by simulated enemy chemical planning or employment would be adequate to Soviet needs. We judge, however, that the Soviets are unlikely to consider such a circuitous--and apparently spotty--regimen of training and planning adequate for chemical use in the massive, decisive manner called for in Pact doctrine. CIA Statute

Soviet armed forces follow an extremely conservative approach to military planning and are methodical in practicing the basic types of military operations which they would expect to conduct in wartime. Documents from the sixties to the present indicate that the inclusion and employment of any "weapon of mass destruction" in a massive strike requires detailed planning and coordination on the part of selected staff elements at various echelons. Such writings indicate that the need for centralized (i.e., front-level) organization and coordination of a mass chemical strike would be even greater than that for a mass nuclear strike. This is because a significantly larger expenditure of chemical weapons would be required to assure the destruction of the same target. Planning and coordination are extremely serious military and political matters because of the need to preempt NATO by conducting strikes against NATO's nuclear delivery systems with a finite number of weapons and because of purely practical concerns for troop safety. Thus, we believe it illogical to conclude that the Soviets would have a casual approach to the planning of something as complex and serious as a massive chemical strike with its requirement for intricate, detailed coordination and planning of weapon allocations, targeting, and strike reconnaissance on the part of selected staff elements at various echelons. CIA Statute (99)

Numerous Pact writings from the early sixties through the mid-seventies indicate planning for massive employment of chemicals or inclusion of chemical missiles and bombs in the first massed nuclear strikes normally is done by staff elements

TCS-5548/83

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28

CIA Statute

at the same time as nuclear planning. There has been no direct indication since that time that a change has occurred in the planning process for the mass (front- or army-level) use of chemicals or any indication that it would differ drastically from nuclear planning procedures. The only evident change is the absence of any indication that such planning for the massive use of chemicals is still being practiced. CIA Statute (100)

Changes in Planning for the Initial Massed Strike.

Classified writings indicate that planning for a front's initial nuclear strike is centralized at front level in peacetime, i.e., at military district or group of forces level, before commencement of the front operation. Both targeting and allocation of resources for all nuclear-capable forces--those directly subordinate to the front and those subordinate to its component armies and divisions--are primarily the responsibility of the front staff. However, if--as the Pact seems to believe--the front offensive (and the war itself) begins with the use of conventional weapons, nuclear planning would become less and less centralized as the period of conventional operations became longer. Pact writings note that rapid changes in the tactical situation would not allow the front to identify all of the targets for the initial massed strike, as would have been possible at the beginning of the war (front operation). Thus army and division commanders and their staffs are to assume primary responsibility for targeting their own missiles, rockets, and artillery. After the onset of nuclear warfare, there is good evidence that they would be authorized to strike targets as soon as they were detected without first receiving approval from the front commander. CIA Statute (101)

Pact classified writings indicate that--at least in the past--planning for chemical employment at front and army level apparently was done by what is currently referred to as the "Nuclear and Fire Planning Group," although it has had other names at different times. This staff organization, a permanent working group at front and army level, is primarily responsible for planning nuclear strikes--in particular, the initial massed strike. As currently composed, each of these planning groups works under the direct supervision of the front or army chief of

<sup>9</sup> For further information on Soviet nuclear planning, procedures, and organization, past and present, see SOV 83-10155JX, Modernization of the Soviet Command-Staff System for Nuclear Operations in Europe, September 1983. CIA Statute (93)

TCS-5548/83

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staff and, as a rule, is composed of officers from the operations directorate, from the staffs of the rocket troops and artillery and the air forces, and from the intelligence directorate. In addition, the commanders of the rocket troops and artillery and of the air forces also can be included within the complement of the group. CIA Statute (102)

Over the years, the composition of the groups and some of their functions have changed. Classified writing suggest that these groups, or their predecessors, may have existed--at least on an ad hoc basis--since the early sixties. By the late seventies they were a premanent feature of front and army control posts. They came about as the result of the experience of CPXs and war games conducted in various military districts and at the Frunze Combined Arms Academy. Through the late sixties to early seventies, the composition of the groups normally included, in addition to representatives from operations, intelligence, rocket and artillery, and air, a representative from the chief of the chemical troops. Representatives from the engineer troops and the missile technical support service also occasionally were included. CIA Statute (103)

In addition to having a chemical troop representative as part of the planning group, evidence from Pact writings through at least the late sixties indicated that the group actually conducted planning related to the employment of chemical (and even biological) as well as nuclear weapons; i.e., it was really a planning forum for the use of "weapons of mass destruction" as well as conventional weapons. The group's activities included constantly refining the existing plan for the initial nuclear strike--composed, at that time, of nuclear and chemical weapons--and its delivery schedule. The groups also worked on the sequence for destroying enemy installations with nuclear and chemical weapons. CIA Statute (104)

Pact writings from the sixties indicated that the group's mission then included performing the calculations involved in forecasting the radiation and chemical situation as a result of both enemy and own weapons strikes. An analytical evaluation station was subordinate to the groups. One anomolous Pact classified writing, even as late as the mid-to-late seventies, appeared to refer to a front-level group for "nuclear planning and forecasting of the radiation and chemical situation," made up of representatives from the different directorates and departments. However, Pact writings from the late Seventies to the early eighties not only give no indication of the presence of a representative of the chemical troops on the nuclear and fire planning group, but also provide no indication that this group is

TCS-5548/83

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involved in forecasting the radiation and chemical situation. Nevertheless, according to recent Pact writing, the chief of the chemical troops has his own control post at front and army level. Subordinate to this post is a computation and analysis station which performs, among other duties, forecasts of the radiation and chemical situation. CIA Statute (105)

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Pact writings traditionally have linked chemical with nuclear fire planning, and the allocation and targeting of chemical weapons would be reflected in one "nuclear" fire plan, rather than in a "chemical" fire plan. For example, one Pact writing 25X1 in discussing the operational directives and combat orders put forth by a front or army, noted that the rocket troops would be told:

- The targets to be hit.
- The number of nuclear and chemical warheads to be expended against each target.
- The yield of the warheads and the formulae of the toxic agents.
- The type of nuclear burst and the time to be ready for the delivery of the strikes.

Although one non-Soviet classified writing from the mid-sixties seemed to involve a strictly chemical strike plan--or a chemical section to an overall operational plan--it apparently referred to chemical strikes conducted in conjunction with the use of nuclear weapons and may have been intended for eventual integration into a nuclear fire plan. At any rate, it was clearly the exception rather than the rule, and neither the inclusion of chemical weapons in a nuclear fire plan nor in a strictly chemical fire plan currently is observed. CIA Statute (107)

The Chemical Support Plan. The only thing that continues to be observed in regard to "chemical" planning is the "chemical support plan." It is concerned with the chemical support provided to a front and is mainly carried out by the chemical

TCS-5548/83

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31

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troops.<sup>10</sup> According to classified military writings, this plan has probably existed since the mid-sixties. It clearly is not, and never has been, concerned with targets, allocations, and possible uses for chemical strikes during an operation. It primarily concerns NBC defensive-protective measures, the employment of smoke (aerosol) and flamethrower (incendiary) devices, and the general combat use of chemical troops during operations. CIA Statute

Nevertheless, the chemical support plan has had some overtones of offensive chemical use. At one time it may have had a role in detailing the support to be provided by the chemical troops during offensive operations. Classified Pact writings up until the mid-seventies noted that the plan included safety measures when troops were employing "special", i.e., in this case, "chemical" weapons. Similar Pact writings since the mid-to-late seventies omit any mention of this subject. The chemical support plan also outlines the munitions, armaments, equipment, and protective means to be supplied to front troops, although we conclude that, for the most part, the "chemical armaments" were not "special" ones containing poisonous gases. The support plan also included assessing the radiological, chemical, and biological situation, and possibly forecasting meteorological conditions--information would be of potential use in planning Pact chemical strikes. CIA Statute (108)

#### Allocations

In contrast to the period before the mid-seventies, when classified Pact military writings<sup>25X1</sup> indicate that fire plans for front or army operations routinely included both nuclear and chemical weapons,<sup>25X1</sup> dozens of front and army-level weapons allocations available since the mid-seventies are for solely nuclear, or nuclear and conventional, weapons. Indications since the mid-seventies of any chemical allocations are sparse, even at lower echelons such as division or brigade.<sup>11</sup> CIA Statute

<sup>10</sup> The support provided by the chemical troops as part of this plan is discussed in the "chemical troop" section. (See page 41). (U)

<sup>11</sup> See Annex H for detailed information on chemical allocations noted in specific Warsaw Pact exercises, war games, and operational planning. It should be noted how (routinely) such allocations appeared during the period from the early sixties to the early-to-mid-seventies. CIA Statute

TCS-5548/83

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In addition, writings from the mid-to-late seventies, reflecting Soviet General Staff planning for the entire Coastal Front, no longer reflect any chemical allocation. CIA Statute

Although there has been since the 1960s considerable variation in allocations for the Polish Front--perhaps reflecting the participation of other countries and of strategic forces--some of the allocations have been similar. 25X1

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Another allocation from the mid-sixties included 198 nuclear weapons and 66 chemical missiles 25X1

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-- 1967: Exercise "LAT0-67 employed 303 nuclear weapons and 137 chemical weapons.

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TCS-5548/83

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These allocations show Pact planning for as many as 400 to 550 "weapons of mass destruction" on the entire Coastal Front during the 1960s, in contrast to recent plans to use 680 nuclear weapons. CIA Statute (110)

Chemical weapons allocations for the entire Warsaw Pact have reflected a clearly predominant role for missiles over the years and as late as 1975. However, Pact writings occasionally have called for a more extensive use of air-delivered munitions.

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Some writings from the mid-to-late sixties claimed that 30 percent or more of fighter-bomber aircraft assigned to support an army could carry out chemical strikes.

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writings, 25X1 Doctrinal from the early sixties to the early seventies noted that some 50 percent of the missiles available to support the front operation might be chemical. Such proportions were routinely observed in the 1960s and sporadically into the early-to-mid-1970s. By the late sixties, however, a trend had begun toward the inclusion of more nuclear than chemical missiles. This trend apparently has continued to the present and chemical missiles are now hardly ever included with nuclear missiles. CIA Statute (111)

In addition, doctrinal writings from the early sixties through the early seventies reflected with decreasing frequency the inclusion of chemical with nuclear weapons in the first massed nuclear strike of the front or army. Although as recently as 1975, instruction for 25X1 students at the Soviet General Staff Academy still referred to the selection of targets for destruction "by the first [presumably massive] nuclear and chemical strike," this information might be dated.

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Even in the early-to-mid-sixties, when references to chemical employment with nuclear weapons in the initial massed strike most frequently occurred, chemicals clearly had a lesser role than nuclear weapons in the first strike and a proportionately greater role later on. For instance, classified

TCS-5548/83

26

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34

CIA Statute

writings indicate that in a 1961 Carpathian Military District exercise, the front was allocated 226 nuclear warheads and 277 chemical missiles to be used as follows:

<u>Use</u>	<u>Nuclear Weapons</u>	<u>Chemical Missiles</u>
First Massed Strike	63	24
Immediate Task	101	124
Subsequent Task	49	79
In Reserve	13	50

By the late sixties and into the early seventies, classified writings had begun to note that although the first massed strike could include several chemical missiles (or weapons), they were not considered in the first strike role but instead were retained for launch during the second salvo. Starting in the late 1960s, Warsaw Pact writings, in a number of instances, indicated that the allocations excluded chemical weapons from the initial strike. CIA Statute (113)

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the actual percentage of chemical ammunition in the basic artillery load of a front, for example, has never been clear. 25X1

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Here again, there is some confusion about what was included in the higher percentages. 25X1

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TCS-5548/83

27

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TCS-5548/83

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Overall, however, since the 1970s there have been few indications from chemical allocations that chemicals still play a significant role in the first massed nuclear strike or, since the mid-seventies, that they even play a major role in subsequent massed strikes. CIA Statute (112)

Possible Reasons For a Lesser Role For Chemicals After the Mid-Seventies

The Warsaw Pact apparently now has acquired sufficient delivery systems to accommodate with nuclear weapons its initial requirement for "weapons of mass destruction," if not all subsequent missions. The steady expansion of tactical and operational-tactical nuclear delivery systems, both ground and air, since the late sixties and early seventies, coupled with the introduction of newer and more capable tactical missiles and aircraft, has allowed the Pact to match and in some categories surpass NATO. Nuclear artillery had been NATO's last area of clear, numerical superiority; however, the Soviets have rapidly expanded their capabilities since the early seventies. The addition of heavy artillery brigades composed of 203 mm guns and 240 mm mortars and, more significantly, the provision of a nuclear capability for the ubiquitous 152 mm gun/howitzers has allowed the Pact to close even this gap. CIA Statute

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During the sixties Pact writings noted a requirement to conduct accurate, close-in fire with low-yield nuclear weapons at minimal safe distances from friendly troops in contact with the enemy. In our view, the widespread introduction of short-range, accurate nuclear weapons into the Soviet artillery forces is partially a response to such requirements. In the past, the Soviets would have been more dependent on chemical munitions, particularly artillery with non-persistent agents, to accomplish such missions. CIA Statute (124)

TCS-5548/83

29

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In addition, at least some of the advantages of chemical weapons, such as minimizing collateral damage, theoretically could be achieved through the development of a new generation of enhanced radiation (ER) weapons. 25X1

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#### Warsaw Pact Preferences in Weapons of Mass Destruction.

Another factor which could explain the lack of emphasis on chemical weapons in recent years is the Warsaw Pact perception of their utility compared to nuclear weapons. 25X1

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in 1981 another 25X1 planner expected to receive chemical as well as nuclear weapons from the Soviets in wartime, but the use of chemical weapons was, at best, thought incidental to the use of nuclear ones. Chemical weapons were considered old--almost obsolete--technology in comparison to nuclear munitions. 25X1

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25X1 to be effective, the most persistent chemical agents would have to be used, but their use could cause major long term problems such as terrain contamination. CIA

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Sensitive military writings suggest that a similar preference for nuclear weapons may exist in the General Staffs of other East European countries--specifically, East Germany and Czechoslovakia--as well as in the Soviet General Staff itself. As in the West, there appears to be an "anti," as well as a "pro" chemical lobby in the USSR and its allied countries. CIA Statute (128)

#### Chemical Enthusiasts: the Advantages of Chemicals.

Classified military writings touting chemical weapons mostly date from the early sixties, although there are a few examples as late as the mid seventies. Writings in the sixties claimed that chemical weapons have a leading role in the arsenal of "weapons of mass destruction" and that weapons loaded with extremely toxic chemical agents are the most powerful, "modern" means of mass destruction, approaching nuclear weapons in the casualties they

TCS-5548/83

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could inflict. Some of this praise, however, was based on the ability of chemical weapons to compensate for deficiencies in the Pact's nuclear capabilities. 25X1

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A few writings as late as the mid-seventies still seem to tout chemical weapons, although the references are more ambiguous than earlier. One document from the mid-seventies, concerning the support of a front, noted that the significance of support has grown with the widespread introduction into the Soviet forces of new, powerful means of destruction, particularly nuclear and special (i.e., chemical) weapons. 25X1

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Discussions of the specific advantages of chemical weapons over the years have centered on effectiveness comparisons with conventional munitions, although there are some noteworthy comparisons with nuclear weapons regarding collateral damage.

TCS-5548/83

31

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Normally, chemicals are ascribed a clear advantage in effectiveness, but there are indications of changing perceptions. For example, Soviet documents from the early sixties discuss the use of nuclear and chemical weapons in mountainous areas, noting that in some cases nuclear weapons should not be used against an enemy defending mountain passes or defiles. Because nuclear weapons could cause extensive obstructions to military movement because of landslides, chemical weapons were to be used in such situations. Similar writings from the late sixties noted that the same results could be attained either with nuclear weapons, using low-yield air bursts, or with chemical weapons. In addition, a classified writing from the mid-seventies concerning front offensive operations noted that strikes with both nuclear and special, i.e., chemical, weapons make it possible to quickly finish the enemy's destruction without reducing the overall rate of advance. 25X1

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\*\*\* In comparing chemical with conventional weapons (apart from ICMs), Pact writings over the years have noted that chemicals:

- Have a longer period of effect, i.e., long-term contamination.
- Have a larger lethal area.
- Are lethal against targets which conventional munitions cannot affect, including targets in overhead shelters.
- Render the use of equipment difficult or impossible for a prolonged period of time.
- Make it difficult, or impossible, for the enemy to remain in or pass through contaminated areas.
- Usually leave captured enemy equipment usable after decontamination.
- Physically and psychologically wear down the enemy, particularly when he is forced to wear his protective gear in contaminated areas for a long time.
- Kill enemy personnel struck by fragments from chemical ammunition.

Other advantages of chemical munitions include increased effectiveness of fire, greater personnel casualties greater reductions in enemy maneuverability, and appreciably smaller expenditures of forces and munitions. 25X1

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TCS-5548/83

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Disadvantages and Problems of Using Chemical Weapons

Whereas chemicals clearly have some advantages over nuclear weapons and even more over conventional weapons, there are also drawbacks that may have emboldened detractors and caused deemphasis on chemicals in recent years. 25X1

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✓✓ Weather. Environmental factors, especially weather make massive chemical attacks much less predictable than nuclear strikes. 25X1

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But for most chemicals--particularly persistent agents such as Soman--the persistency of the agent and therefore the effectiveness of the weapon is decisively affected by the weather. Weather also critically affects troop safety because it governs how close strikes can be conducted to friendly troops.

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that if weather conditions were favorable, ensuring the safety of the attacking troops, chemical agents could be used against various targets in lieu of nuclear strikes. CIA Statute (135)

✓✓ Wind. Warsaw Pact writings consistently express concern for the hazard to Pact troops posed by downwind contamination. Thus, Soviet doctrine allows the use of chemicals only on distant targets when the wind direction is toward friendly forces. There appears to be far more concern in Pact literature for troop safety in a chemical environment than with nuclear weapons. Although similar concerns were expressed in the early sixties about ground burst nuclear weapons, in more recent years the Soviets have seemed to stress low-yield air-bursts, which greatly reduce radioactive fallout, thereby improving troop safety in comparison to highly toxic chemical weapons. 25X1

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TCS-5548/83

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41

CIA Statute

In addition, these authors show concern that the prevailing winds in Europe are from West to East. One sensitive document noted that in the Coastal (Polish) Front, a wind of westerly or southwesterly direction in the surface stratum favors enemy use of chemical weapons and limits Pact capabilities to use nuclear ground bursts as well. 25X1

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Temperature. Pact writings note that cold temperatures have an adverse effect on persistent agents. In the secondary cloud, a drop in temperature below freezing would render the toxic effect of gaseous agents practically non-existent. Finally, the persistence of most agents is reduced in cold weather, although some such as mustard may retain their persistence until spring thaw melts the covering snow. CIA Statute (137)

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Precipitation. Pact authors recognize that heavy snow or rain reduce the effectiveness of chemical weapons. Precipitation "washes" the toxic agent from the atmosphere and brings the primary cloud of agent down to ground level thereby reducing its range of effect. Precipitation also prevents the generation of a secondary cloud. Snow covers the drops of agent on the ground and prevents evaporation which forms the secondary cloud. Rain washes the agent into the earth, preventing agent evaporation. Moreover, many agents such as Sarin and Vx are water soluble. CIA Statute (138)

Other drawbacks or complications in chemical planning addressed in classified Pact writings are the effects of rising ground, valleys, watercourses, and large obstacles in the terrain. Although chemicals offer advantages for destroying enemy units, particularly in areas through which Pact forces need not pass, some of these limitations could endanger friendly troops if they need to pass through contaminated terrain. Pact authors note that there can be prolonged stagnation of agent vapors, that is, extensive contamination in forests and in gorges

TCS-5548/83

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42

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and hollows in mountainous terrain. In the mountains there is an added danger that the agent cloud may unexpectedly seep down for miles into positions of unwary friendly troops. Pact authors also address the use of chemicals in deserts, when the persistence of toxic agents is considerably reduced particularly during the day. The Soviets also recognize that decontamination would pose a huge requirement for water in addition to that required for normal operations in a desert. CIA Statute (139)

✓✓ Quantity Required. Classified writings also note that an enormous quantity of missiles, bombs, or shells would be required to provide effective chemical agent distribution and to ensure adequate target neutralization. More delivery systems are required to conduct a massive chemical strike than a massed nuclear attack. There also are a number of targets which cannot be destroyed with chemical weapons. Pact authors in the mid-to-late seventies noted that the initial massed strike is critical and that success is gained by the side that uses the greatest number of nuclear warheads or hits the maximum number of targets in the least amount of time. No mention whatsoever was made of chemical or special warheads. At least in the case of Pact missile systems, the nuclear "battle of the first salvo" is apparently one good reason for a stronger emphasis on nuclear, rather than chemical munitions. CIA Statute (141)

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According to sensitive Soviet writings, even in the early 1960s when chemical missiles routinely were allocated for potential use in exercises at front-level and below, they frequently were not exercised because the staffs did not have

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TCS-5548/83

36

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enough launchers available to reach the required level of neutralization. Specifically, these writings noted that the "great" quantities of chemical missiles which needed to be launched in a limited time to neutralize a given objective often far exceeded the delivery capability not only of an army but also of a front. This judgment was based on exercise practice that, at any one time, at least one-third of available launchers were withheld--i.e., loaded with nuclear missiles--while other launchers were in transit or were setting up in new siting areas. One document stated that:

"This is precisely the reason that frequently during front exercises the majority of missiles with chemical fillings allotted for an operation remain unexpended; and when they are used, the required reliability of destruction of targets is not attained in the majority of cases." [emphasis added]

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Since the late seventies, when the Soviets began the process of fielding a new generation of more accurate missiles and more accurate versions of existing missiles, there probably has been a reduction in the numbers of chemical missiles needed per target. 25X1

25X1 Improvements in accuracy also would make the use of various types of conventional, high-explosive missiles more attractive. CIA Statute

✓✓ Unpredictability. Chemical weapons can produce extremely high casualties on an unwarned and unprotected foe, but even minimum warning and a modicum of protective gear, shelter, and training could drastically reduce the effectiveness of a strike. The results of chemical strikes could be relatively uncertain and dependent upon conditions which, in large part, might be beyond the attacker's control. In contrast, nuclear strikes would provide higher, more predictable levels of casualties--although they also, to some degree, could be affected by uncontrollable factors. CIA Statute

It is extremely difficult to compare--in an absolute sense--the chemical casualties which the Pact expects among its own troops (warned/protected versus unwarned/unprotected) with those it expects amongst NATO's forces because of significant differences in the evidential base. 25X1

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37

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25X1 [REDACTED] Our data on expected NATO casualties from Pact chemical strikes date from an earlier time, ca. 1960-1970, and generally refer to casualties incurred by smaller units, which also were less spread out geographically and hence relatively more vulnerable to chemical effects. Often NATO casualties in the sixties were given in numbers of personnel directly located in the area of the primary and secondary effects of a particular chemical missile. As would be expected, such casualty figures usually were extremely high.<sup>13</sup> CIA Statute (146)

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The Advent of Improved Conventional Munitions. Another possible reason for deemphasis of chemical weapons since the mid-1970s is the ascendance of various types of modern, advanced, or improved conventional munitions (ICM) which may have acquired some of the missions of chemical weapons while lacking their disadvantages. ICMs would be readily available at the commencement of conventional operations. CIA Statute

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<sup>13</sup> Appendix D presents details of Pact estimates of losses to NATO chemical strikes. (U)

TCS-5548/83

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Classified writings 25X1 indicates that conventional missiles with cluster warheads have been available to Soviet forces since the early seventies. Particularly since 1974, the use of ICM missiles has been increasingly simulated in Soviet CPXs and FTXs. We believe it significant that the increasing play of ICM missiles has occurred at much the same time that play of chemical missiles has largely disappeared.

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Whereas in the past nuclear and, to a lesser extent, chemical missile warheads were notionally allocated in Soviet exercises, now the warheads predominantly are nuclear and, to a lesser extent, ICM.

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CIA Statute

CIA (155)

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Pact

Classified writings concerning frontal operations from approximately the same time, call for the use of "massed strikes with cluster-armed missiles and artillery" during combat actions without the use of nuclear weapons.

CIA Statute

(155)

The most frequently discussed Pact ICM is the cluster or cassette warhead weapon--most often mounted on tactical and operational-tactical missiles, but also artillery shells or bombs containing submunitions or subprojectiles. Their submunitions may be of various types--HE fragmentation, armor piercing, hollow charge, incendiary, or smoke--and are primarily intended to provide broad area destruction of "soft" targets. These targets, based on 25X1 classified Pact writings, are similar to chemical targets. These include NATO's nuclear missile launchers and other nuclear systems, air defense weapons, tank forces, artillery, infantry strong points, radioelectronic

TCS-5548/83

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CIA Statute

~~TOP SECRET~~

~~TOP SECRET~~

47

~~TOP SECRET~~

CIA Statute

CIA Statute

equipment and control posts, command posts, rear area  
installations, helicopter pads, and airfields. CIA Statute  
CIA (153),

During the mid-sixties, classified writings viewed missiles  
carrying armed unitary HE warheads as essentially worthless  
against virtually any type of target. These same writings  
extolled the potential advantages of ICMs, and to a lesser extent  
unitary incendiary warheads, as a much more effective replacement  
for unitary HE. 25X1

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CIA (154)

CIA Statute

25X1

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CIA Statute

(156)

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the SS-21 missile may  
have a fuel-air explosive warhead option--as well as nuclear,  
chemical, and ICM. CIA Statute (157)

#### Preparations for Chemical Protection

Despite the lack of attention in recent years to offensive  
use of chemicals, the Soviets clearly have continued to maintain  
an offensive capability and continue R&D in offensive agents and

TCS-5548/83

40

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CIA Statute

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48

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munitions. The Soviets, and to a lesser degree, the other Warsaw Pact members have continued to expand and upgrade their chemical protective capabilities. This not only would facilitate defense against NATO use of "weapons of mass destruction" and reconstitution of Pact forces but also would improve their capability to support the offensive use of toxic chemical agents. Writings <sup>25X1</sup> indicate that Warsaw Pact chemical troops, and to a lesser extent, probably combined-arms forces, have continued training at special chemical training centers in the USSR and Eastern Europe <sup>25X1</sup>

<sup>25X1</sup>

Apparently live agents are used primarily to create a highly-toxic training environment, rather than practice the offensive use of chemical munitions. CIA Statute (83)

The Chemical Troops. The Soviets have continued to expand and upgrade the capabilities of their own chemical defense troops and those of the other Pact countries. In the Pact ground forces, separate chemical defense units are organic to troop formations from front through regimental levels. Chemical defense units also are assigned to most air regiments. In the navy, shore bases have a chemical services chief and a small chemical defense unit, and larger surface combatants have a full-time chemical officer and a small number of chemical specialists.<sup>14</sup> CIA Statute (84)

\* The major missions of the chemical troops seem to be "protective," including preparation of the combined arms forces

<sup>14</sup> There is evidence that the chief of chemical troops at the front Hq has three departments, one of which is "chemical armaments and equipment" (while the others are "operations" and "reconnaissance and assessment of radiation situation"). In nearly every case, however, "chemical weapons or armaments" are directly linked with "protective means." Discussions of chemical troops' capabilities often refer to smoke screens, flamethrowers, or the use of aerosols against enemy electro-optical devices used for reconnaissance and weapons guidance. Moreover, they often occur specifically in the context of planning for the protection of friendly troops from enemy "weapons of mass destruction." "Armament" or "weapon" can also be translated as "equipment," and in one sensitive Pact writing from the early seventies, the chemical troops' "chemical munitions and protective means" were contrasted in the same paragraph with the front's "special" (i.e., highly toxic gas) weapons. Thus, although it is possible that "chemical troop armament" references meant some form of deadly gas munition, it seems more likely that these were smoke, aerosol, incendiary/flame devices--or even routine chemical defense vehicles and equipment. CIA Statute (79)

TCS-5548/83

41

~~TOP SECRET~~

CIA Statute

~~TOP SECRET~~

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49

~~TOP SECRET~~ CIA Statute

CIA Statute

and the rear forces for operating in an NBC environment and eliminating the effects of "weapons of mass destruction." 25X1

wider role is well established in practice. The major role of chemical troops in the elimination of the aftereffects of NATO's use of "weapons of mass destruction", including nuclear effects, and the restoration of the combat effectiveness of Pact units is reflected in numerous Pact classified writings. This suggests that a major reason for the expansion and upgrading of Soviet chemical defense units in recent years has been to facilitate restoration of Pact combat effectiveness after NATO's nuclear strikes. CIA Statute (85)



The primary tasks of the chemical troops as reflected in recent Pact classified writings 25X1 are:

- Locating nuclear bursts: A task which has rapidly grown in importance since the mid-seventies and is now frequently mentioned as the first of the chemical troops' many tasks.
- NBC reconnaissance using helicopters and ground-based assets.
- Monitoring radioactive and toxic chemical contamination.
- NBC decontamination of troops, equipment, buildings, and large areas of terrain and assessment of the radiation and chemical situation following the enemy's use of "weapons of mass destruction".
- Using flamethrower units of various sizes and equipment, particularly in urban areas.
- Laying smokescreens to camouflage and obscure troops and installations and using aerosols to counter enemy electro-optical devices for reconnaissance and weapons guidance.
- Providing the combined-arms forces with material support, including chemical troop weapons and protective means.

CIA Statute

25X1

TCS-5548/83

42

~~TOP SECRET~~

CIA Statute

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In addition, however, the chemical troops have a mission to support the use of toxic chemical agents and munitions by the combined-arms forces--if not actually using such substances themselves. There are continuing references in classified Pact military writings, well into the eighties, to the chemical troops' role in providing the front with "chemical (not 'special') armaments/munitions/equipment and protective means." To what extent the chemical "armaments" provided by the chemical troops include toxic chemical agents and munitions--rather than just smoke and flame devices and chemical defense equipment--is not clear. The context of most of the references strongly suggests that, for the most part, toxic chemical agents and munitions are not meant by this term. CIA Statute

Because toxic chemical agents and munitions probably are maintained in what the classified writings term depots for "chemical troops, armaments, and protective equipment"--and because the chemical troops are the best trained in handling toxic agents--it is possible that these troops also have some role in providing "special" munitions to the front. 25X1

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For the most part, however, the supply of toxic chemical munitions to the combat forces seems to be the function not of the chemical troops, but of various rear services organizations. CIA Statute (87)

The most recent unambiguous reference in classified writings to a chemical troop role in support of the use of toxic chemical agents and munitions occurred in the mid-seventies. In addition to defensive duties, one task of chemical support carried out mainly by the chemical troops was to organize and carry out safety measures when chemical, i.e., "special", weapons were used by Pact troops. CIA Statute (88)

Pact classified writings 25X1 from the sixties to the early seventies, however, outlined a much broader role for chemical troops in offensive chemical operations at all

TCS-5548/83

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CIA Statute

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